

The PBL method and the performance of Teachers from the Pitágoras Medicine Faculty of Eunápolis-BA: A Case Study

Mário Alessandro Gontijo de Melo

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Abstract— *The present study is a qualitative research of an ethnographic nature, carried out in the field of education, to raise comparative aspects through a case study. The scenario of this research occurred simultaneously with the challenges and transformations that the professors of the Faculdade Pitágoras de Medicina de Eunápolis are facing with the innovative methodology adopted by the institution, which started its activities in September 2018. In 2001, it was defined by the Ministry of Education and Culture (MEC) that Brazilian medical schools would have as their National Curriculum Guidelines (DCN) the guidance of their educational guiding matrices, the formation of a graduate with a profile to meet the needs of the country's health system. These new directions would bring great changes in the objectives and in the form of education for the new faculties recently implanted in several Brazilian states. In order to obtain new skills and competences, the courses would start using active teaching-learning methodologies with a focus on the attention to biopsychosocial aspects, employing areas of competence in the dimensions of management, education and health care. The research does not pretend to be a static or final point, it only reveals the moment when medical education passes through the new challenges of the methodological transition, and can be a tool for reflective analysis for the implementation of the next periods throughout the Medicine course in Eunápolis. The research result was satisfactory and the method was well accepted by the team.*

I. MEDICINE AND ITS TRANSFORMATIONS THROUGHOUT BRAZILIAN HISTORY

This chapter is dedicated to the account of the long historical path that Brazilian medicine contributed to the establishment of the first schools of medical education and the context in which it began. From the discovery of Brazil until the arrival of Dom Joao VI in 1808, the scenario of care for the sick was linked to indigenous wisdom, especially to the knowledge that the Indians had of the roots and leaves as antidotes for healing diseases, as well as the action of the missionaries who, when they arrived here, specialized in the knowledge of popular

medicine, creating botanicals for this purpose. We cannot forget yet a few doctors who came from Portugal because they were working on sick care. We cannot, in the end, forgetting the popular practices of Africans and Portuguese settlers who were often used in the hope of reducing the suffering of those afflicted by diseases. Freyre (1992), in his work *Casa-grande e senzala*, reports the way in which medicine was practiced by Portuguese colonists and peoples of indigenous African cultures:

Since the arrival of the Portuguese crown to colonial Brazil, the medical education scene has obtained greater possibilities for progress in the face of the various

difficulties of the time for the concretization and institutionalization of an organized civilization. The forging of science discourse took many years since the 16th century, and, around the third decade after the discovery of Brazil, the first medical activists began to arrive. The art of healing was carried out with few therapeutic resources, brought from the Iberian Peninsula to a tropical country. Local diseases were treated by shamans who took advantage of the local flora to cure diseases.

In the isolation of new lands, there was only the shamanism and the work of the Jesuits in dealing with tropical diseases that are still little known. Years, decades and centuries passed and the evolution of treatment was ephemeral even in Europe, at least to face the pathologies of the time that devastated

The relationship of health as an institutional policy began with the creation of the Liga Pró-Saneamento in 1918, a project at the national level that aimed at valuing rural people. Driven by sentiment after the Spanish flu epidemic, the health defense movement was carried out on expeditions in favor of an agricultural Brazil, the main economic activity at the time. The appeal to treat rural endemic diseases denounced the conditions in which the agrarian populations that faced diseases, such as yellow fever, chagas diseases, malaria and cholera lived, and contribute to improving the economy and health of men in the field.

Politically, it was not so easy to resolve the logic of centralization of power in the State, as there was still no clear model of what the division of financial resources would be between the most productive and the poorest states. Wealthier states like São Paulo differed from the poorest states in the federation in terms of the amount of funds raised. Poor states did not have the structural and installed capacity to combat their daily problems, and in 1923, São Paulo stood out with the creation of its own department, the National Department of Public Health (DNSP). It was an autonomous body, but it allowed the federal government to inference, in cases of epidemic outbreaks, if needed. According to Fonseca (2007), in 1930 the Ministry of Education and Public Health (Mesp) was born, which was the first centralizing and

institutionalizing body created to think about policies at the national level. Only in 1937, under the dictatorial regime, was the National Health Department (DNS) born, which aimed to implement norms and standardize national activities with a view to decentralizing their execution at the state level.

The current health policy has its basic guidelines for public health and hospital services. In the 1930s, Brazil created several ministries, such as work, and organized legislation with several decrees, such as the creation of pension funds, for example, in all cases and pensions. of health. Political development around the guarantee of health rights began with increasingly greater inclusions in society. The evolution of the Ministry of Health (MS) and of education occurred in response to demands and social and political transformations. For many years, statewide.

At the beginning of this century, the federal government's strategy to open more health facilities and increase the coverage of health care for the population, through basic health care,

II. METHODOLOGICAL ROUTE

The qualitative research had a characteristic that allows the author to participate in the phenomena that seek to capture, during the literary survey and interviews to be carried out, the objective to achieve the content of the interpretation of the research reality. The intention was to understand, by comparing the methods, that teachers with experience in the traditional method are adapting to the PBL in view of the results. At the end of the scientific search, the selection of the sample to be researched and the interviews, I analyzed the data that brought meaning to society.

When starting the course on September 18, 2018, the group of educators was composed of professionals graduated in different backgrounds. The selection followed the criterion of experience of the least two years. Four doctors, four were selected. Of the group of biologists, only two experienced the atmosphere of the traditional classroom, a psychologist and a pharmacist, the latter with experience of higher education teachers.

Table 1 - Demonstrative table of teachers of the first year of medicine in Eunápolis-BA

| Teacher | Teaching experience | University graduate |
|-----------|---------------------|---------------------|
| Teacher 1 | 06 years | Medicine |
| Teacher 2 | 06 years | Medicine |
| Teacher 3 | Did not have | Biology |
| Teacher 4 | Did not have | Biology |

| | | |
|------------|--------------|----------------|
| Teacher 5 | 08 years | psychology |
| Teacher 6 | Did not have | Biology |
| Teacher 7 | 07 years | Biology |
| Teacher 8 | Did not have | Biology |
| Teacher 9 | Did not have | Medicine |
| Teacher 10 | 15 years | Pharmaceutical |
| Teacher 11 | 4 years | Medicine |
| Teacher 12 | 06 years | Medicine |
| Teacher 13 | 02 years | Biology |

Source: Human Resources Sector, Faculdade Pitágoras de Medicina, Eunápolis, 2018.

After the sample selection, seven teachers were within the criterion of previous experience in the traditional methodology for more than two years, as shown in Table 2 (teachers qualified for the interviews).

Chart 2 - Teaching staff selected for the comparative study of the research at Faculdade Pitágoras de Medicina de Eunápolis

| Teacher | Teaching experience | University graduate |
|-----------|---------------------|---------------------|
| Teacher 1 | 06 years | Medicine |
| Teacher 2 | 06 years | Medicine |
| Teacher 3 | 08 years | psychology |
| Teacher 4 | 07 years | Biology |
| Teacher 5 | 4 years | Medicine |
| Teacher 6 | 06 years | Medicine |
| Teacher 7 | 02 years | Biology |

Source: Information provided by the Human Resources department of the Pitágoras de Medicina Faculty of Eunápolis, 2018.

This nomenclature used in the table indicating the teacher and the number refers to the ordering of the semi-structured interviews that, after having been carried out, were transcribed and thus used throughout the analysis, preserving the name of the teachers.

To facilitate the analysis of the collected data, I sequenced it in phases to facilitate the treatment of the results. In the first phase, I took care of correcting transcriptions originating from audio recordings. Then, I tried to synthesize parts of the reports in paper clippings (pamphlets), which I called nuclei of meaning.

III. PRESENTATION AND DISCUSSION OF DATA

When analyzing the data of this research, I considered it important to portray the description of each one of the five themes a little. According to chapter 3 (methodological path), each theme was called an axis. The five axes originated from the biggest challenges we faced in the first year of the medical course, when working with the innovative pedagogy adopted by the Pitágoras Faculty of Eunápolis.

In axis 1, my comparative intention was to measure the differences between the two methodologies in terms of lesson planning and I asked teachers to comment on their experience.

After the transcription of the interviews, find the difficulty of starting the sequence of filipinas due to the richness and the amount of similar phrases. I found the possibility of nuclear this item in three more significant points: the first dealt with the difficulties and facilities of the idealization of the classes; the second portrayed the teacher's change in posture, and the third consisted of the nucleation of phrases that reported the application of the method in the classroom.

Regarding the criterion of difficulty and ease between the methods to prepare the classes, at first glance three teachers stated that the difficulty in planning in the PBL was related to the exposure of the content and this was exposed in the sentence of Professor 6, who portrayed that "[. . .] in the traditional model it is easier because you are able to prepare the whole class before it happens ". Previously using the traditional method, it was enough for the teacher to master the content, to review his synthesis in a classroom for students "[...] replicating the production of his class in other classes for later classes" (PROFESSOR 2).

As a result of the interviews, questions arose, such as: "And now?" "How am I going to do when I arrive in front of the students to start classes?" "What am I going

to write to pass on the knowledge?" "Should I create a step-by-step to get to the front of the students and start a class on the subject?" Doubts like that were raised by Professors 2, 4 and 5.

The making of a class in the traditional method, usually in Datashow, served as the proper planning of the content to be passed on to students. Silva (2013) says that this technology was widely disseminated in higher education in which all teachers were applying this tool with teachers.

knowledge, having the role of transmitting the content of their class schedule through slides.

The insertion of technologies in the classroom did not replace the teacher, quite the opposite, it expanded the possibilities of the educational practice of this professional. However, the presence of technological resources required a new attitude from the teacher. From the sole holder of knowledge, who will transmit it to the student (SILVA, 2013, p. 11).

The teachers' report, when they joined the PBL, shows that this technological tool is no longer the main tool. In active pedagogy, the teacher does not have complete mastery of what will happen in the classroom, for having left the role of transferring knowledge. As Professor 3 reported, "[...] the facilitator becomes the stimulator for the construction of knowledge, leading and directing the frontiers of knowledge established in the modular units of the content".

Therefore, the planning of the classroom should provide a measure of time to encourage the student to complete a cycle in which he himself is self-taught and motivated to solve the problem situations presented. Planning in the PBL includes a more proactive movement by the teacher. According to Toledo Júnior (2008), it is necessary to elaborate situations that are inclusive, so that students feel part of the problem through previous knowledge and their curiosity and he is encouraged to build knowledge alone or with his group of colleagues.

The PBL includes the structuring of knowledge within a specific context, allows the student to face concrete problems, which could enhance the development of clinical reasoning, favors the development of self-directed study skills and increased motivation for study.

The PBL method values, in addition to the content to be learned, the way learning occurs, reinforcing the student's active role in this process, allowing him to learn how to learn (TOLEDO, 2008, p. 126).

He perceived anguish of colleagues throughout the interviews, due to the new format that they should have to prepare their lesson plans under the new model.

Professor 5 said: "[...] in the traditional method we prepared the class as holders and authorities of knowledge and it was up to the student to absorb, already in this new method the student must build his knowledge". It was evident, in my analysis, that the interviewees 1, 3, 5 and 6 of this axis effectively believe that knowledge should be built instantly by the students, with the teacher being able to guide the trajectory so that his students reach the proposed objectives.

Regarding the second criterion (teacher postural change), the teachers attributed the new paradigm to the alternation of the content transmission board to a tutor or knowledge advisor. The difficulty in changing the logic of the content transmission generated discomfort that led to a strangeness in the first moment.

These second criteria for the displacement of the place of the teacher at the center of both theoretical and practical learning activity. Four of the seven teachers reported that the preparation required greater teacher discipline in studying the content and describing a lesson program with a step by step, so that the teacher would not be the main teacher of the classroom. Professor 7 also reinforced that this role places the student at the center of the learning activity, whether theoretical or practical.

Another point that demanded the educator's postural change was made clear in Professor 1's account: "[...] PBL requires a change in the teacher's place of speech [...]" and "[...] the method reverses the logic of knowledge transmission for the production of it ". These reports enriched my perception, knowing that, even with a short time in teaching practice, a large part of the teaching staff embraced the method's intentionality and dedicated themselves to changing their paradigms in relation to their own postural change. possible; teaching requires understanding that education is a form of intervention in the world; teaching does not transfer knowledge. Creating possibilities to build and produce in the perspective in which the student is autonomous, we induce him to study through his doubts and concerns as part of classes. This displacement of the listener to a more participatory, reflective and questioning role is the objective of the method in the formation of the professional of the future. When entering with the PBL strategies, the student comes into contact with the world of laboratory practice protected from the institution consortium with the real practice of SUS lived in health centers.

The same approach of attention should be given to the specific objectives of the content covered, to avoid students' daydreams during the construction of knowledge. Before, in the traditional, the teacher read the proposed objectives and went to the construction of his class. Based

on innovative pedagogy, the discipline of

teacher to follow the specific objectives must be reviewed at all times, during the stimulation and construction of knowledge by students in the trajectory of what was planned.

The third criterion analyzed in this first axis (planning) was reported by six teachers of the seven interviewees who mentioned that the active method of learning requires greater teacher preparation. According to the perception of educators, reports such as Professors 1, 3, 4, 5, 6 and 7 mention that "[...] in PBL it takes much more time to plan, as it requires greater creativity, greater articulation of different types of knowledge to integrate practice with theory ". I noticed the challenge in the statements cited in the elaboration of classes that were dynamic and contemplated the general and specific objectives, so that the student triggers the construction of his knowledge, conquering the understanding of the content in significant ways.

This integration of knowledge really requires a greater teaching domain to trigger, direct and integrate the frontiers of knowledge involving practical and human skills than simply elaborating a class in the traditional method.

It was clear, in line with these six teachers, that, when executing the plan of the classes elaborated in advance of the class week, the teacher should stick to the objectives of the modular contents, and not to his scientific summary, which they used to do in the traditional method. classroom.

Not traditional, the way to plan, many times, already included the way to pass the content through the expository class, as previously mentioned by slides. The domain of the class was verticalized, that is, the teacher ministered to the student who occupied the role of listener. With this new challenge of innovative pedagogy, in addition to the domain of knowledge, the teacher must be prepared for the different situations that the student will create with his group, changing to a more horizontal way in the construction of knowledge.

The teacher awakens the student to new paths by asking questions that lead to reflection and knowledge seeking to answer a practical or theoretical problem included in the lesson plan.

Another point that was relevant for four teachers to forget the challenge of the method was the stimulation of various sources of research in the PBL method, comprising videos, scientific articles and literature, in addition to those established in the college library and the possibility of instant Internet

searches (TEACHERS 1, 2, 5 and 7). This fact makes the active methodology more dynamic and creative, requiring a degree of study from the teacher to be aware of the boundaries of the construction of knowledge in relation to various.

Still regarding the challenges of the planning requirement criterion, four teachers reported that the PBL encourages the teacher to deepen his studies around the topic that he will constantly tutor, in order to avoid the discomfort of not knowing how to handle the doubts of more curious students. from elementary school that placed the teacher as the center of knowledge.

As it is considered a characteristic among the methods, I sought to research how the conduct of classes has been throughout this first year of the course. On this topic, only two teachers cited educational strategies used in the management of their classes.

Although the answers were convergent to the question in axis 2, which argued about the use of educational tools throughout the year, five teachers preferred to mention the importance of knowledge of PBL, to apply the best strategies according to the needs of the class, being able to change the tools according to the difficulties of the students or the size of the day.

I noticed, in the speeches of the five teachers who did not mention the names of the tools, that the choice of this strategy involved the need for each group in addition to the criteria, such as the size and difficulty of the group and the environment in which the students were. "Using the environment and the difficulties of the moment to potentiate a problematization is the best strategy to stimulate the student to reflect" (PROFESSOR 7). Teachers 3 and 6 complemented: the profile of the student's interest, the place where they are and the specific objective intended in the decision to alternate the learning tool.

In just a moment, I noticed, in the speech of a teacher, the report of his difficulties in relation to this axis, which does not mean that this teacher had little knowledge of the PBL tools, but that he had difficulty in applying them. "[...] I admit that I still can't use the PBL tools properly in many times, administering my classes to motivate students to do an active search and ask surprise questions so that I can stimulate the search for knowledge" (PROFESSOR 5).

I was able to verify, with this question, that all teachers value dynamics to stimulate the student in the search for knowledge, stimulating his own learning, to use the pedagogical tools of the active method. This demonstrates the interest of teachers in learning to learn from their own experiences and in managing the method.

All the teachers made it clear that it is important to use these tools, so that the student takes a role in self-education and is responsible for building their own knowledge.

Among the main characteristics, the innovative teaching-learning methods clearly show the migration movement from 'teaching' to 'learning', the deviation from the focus of the teacher to the student, who assumes co-responsibility for his learning (SOUZA; IGLESIAS; PAZIN, 2014, p. 284).

It was clear that, in the testimony of four participants in the case study, choosing the most appropriate educational tool to conduct the students' search for knowledge to achieve the objective of the intended content was and has been the greatest challenge for this first year of the course.

According to the reports of teachers, this "teaching to learn" (PROFESSOR 6) movement is achieved through the use of the tools mentioned by Professors 2, 3, 6 and 7, such as problematization, meetings for the discussion of clinical cases, dynamics for analysis, criticism and reflection of practice, case study, always starting from the student's prior knowledge.

Here I would also like to point out that, in general, all teachers declared it easier to teach classes by the traditional method, in which they used, in their exhibits, slide projection. I considered it important to ask teachers how they did to conduct their classes in the method they applied previously, before enter the Pythagorean Medicine intuition. The classes were unanimously prepared in Power Point, in which a deposit of knowledge was made similar to a bank deposit, where, when passing the years, the educator could revise and increase items of his complete domain of knowledge, making it much easier to teach future lessons.

The act of teaching-learning must be a set of articulated activities, in which these different actors increasingly share shares of responsibility and commitment. For this, it is essential to overcome the banking concept, in which one deposits contents, while the other is obliged to memorize them, or the licentious, unlimited, spontaneous practice of individuals given to themselves and their own luck. , in an emptiness of what they do, as opposed to, the liberating education is a political practice, reflective and capable of producing a new logic in the

understanding of the world: critical, creative, responsible and committed (MITER, 2008, p. 237).

The phase in which the teacher is the main protagonist of the classes according to his wishes and

convictions and his articulation of the practice is related by TSUJI (2010) as a review of responsibility for his role.

Regardless of the desire / need, students swallow the materials, regurgitate in the tests and try to forget them afterwards. It is believed that in this way they reach the final years prepared to learn the practice of medicine. This is how medicine has been taught for years. Knowledge evolves in a speed between 40% and 50% of what is taught today is abandoned or put into doubt in four or five years (TSUJI, 2010, p.79).

Current management requires that the teacher take on the role of tutor, be a facilitator of knowledge and program trajectories in their class time. It also requires that he be able to arouse curiosity, research motivation and be prepared for unusual questions. This will require not only a knowledge of the application of the tool or method, but a postural preparation to encourage the student to go in search of new knowledge.

I noticed, in the professed Professor4, that the name “[...] requires an active method the need for its own postural transformation, so as not to be reactive to the questions and to solve the students' doubts”. Even mastering the content, he must often answer with another question, to guide the path of the search for learning to learn.

The comparisons I made for the assessment axis were centered on two questions: the first, the cognitive strengths and weaknesses between the teaching methods; and the second perception of the student's cognitive displacement. and the performance measures of the simulated scenarios of the teachers' laboratory practices, the interviews followed a path that extrapolated my intentionality, migrating to a spontaneous evaluation of colleagues.

Case studies like this extrapolate the focus of the question from the axis and even reveal a construction of knowledge beyond what was imagined. I detected through the speeches as Professor3 - “Assumed a composition with a horizontal aspect due to the possibility of formative assessment where I do not need notes and I can contribute with my professional perceptions in the formation of the student [...]” - edoProfessor4: “The method active articulates scientific knowledge with less biologist and more biopsychosocial knowledge, relating ethical and spiritual factors to effective communication and financial and market perception”. Such statements are in line with Ludke and André (1986), who report on the unusual that may appear during scientific research. These statements revealed the teachers' postural and humanistic change, which I did not expect to find in such a short time of practice in the method.

The case studies are aimed at discovery. Even if the researcher starts from some initial theoretical assumptions, he will try to constantly keep an eye out for new elements that may emerge as important during the study. The initial theoretical framework will thus serve as a skeleton, a basic structure from which new aspects can be detected, new elements or dimensions can be presented as the study progresses (LUDKE; ANDRÉ, 1986, p. 18).

There were unanimous reports about the positive reach of the active methodology in relation to the traditional method in anchoring practice over the course of the course. The stimulation of human skills, associated with the perception of the student's attitudinal and behavioral changes prevailed in all reports. According to the seven teachers, a common nucleated phrase is that “[...] the PBL method still provides the use of other knowledge domains favoring the creation of other knowledge”.

Another point unanimously addressed was the application of scientific cognition to practice. Professor 2 portrays well in his speech, when he mentions “[...] the combination of practical competence with the higher work and a critical reflection and teaches the student to act in new situations and in the doctor's daily life”. The PBL method, as previously reported, inserts students into a real environment since the beginning of the course. It is noted that students are being prepared for a behavior to act on the patient instead of illness.

The articulation of scientific knowledge with other human dimensions takes and empowers the student for self-learning in addition to the articulation of practical knowledge, since this integration with the community improves reflection, critical analysis and the ability to cope with everyday problems of the future doctor.

I emphasize that Professors 1, 2 and 4 mentioned that “[...] both methodologies achieve the same cognitive result, but in PBL the psychomotor skills and attitudinals are most significant and were very different for the physician's training ”.

These teachers attributed the association of a set of laboratory practices and activities in the community to theoretical knowledge built in parallel and improved skills in relation to the construction of the mature individual. According to Tsuji (2010), the transition from immaturity to maturity (personality) is a painful process that depends on experience, insight desire.

ValeressaltarafaladoProfessor7, who pointed out “[...] when teaching in the traditional method, effective communication relationships, ethics in the work environment and the best adaptation to everyday diversities were not treated as training the student and evaluating these domains will help the professional future

to overcome new challenges ”.

With regard to axis 4, I aimed to compare how the teachers proceeded with the use of active pedagogical tools in the first year of the course. About this, four of the seven teachers cited the resistance of the teacher's stance as a barrier to resort to these teaching strategies throughout the year.

Of these four teachers, Professor 2 added that, “in addition to the teacher's own resistance to adapt to the new teaching models, it is important to remember that students also came from a traditional high school” and, for this reason, face the strangest role passive of the teacher.

The task of dealing with new and different strategies is somewhat complex and requires changes in habitus and paradigms: among university professors there is a predominance of content exposure, emaulas expositivas, or lectures, a functional strategy for the transmission of information. This habitus reinforces the action of transmitting ready, finished and determined content, similar to previous experiences. Still, the current curricular configuration and the predominantly conceptual disciplinary organization (in grid), have the lecture as the main form of work, and the students themselves expect from the teacher the continuous and passive exposure of the subjects that will be learned (SOUZA; IGLESIAS; PAZIN , 2014, p.288).

This comparative question between the methods brought up an important point: the shift in the role of the teacher from the center of the educational process. The need for qualification of the teaching staff in the first year of Faculdade Pitágoras de Medicina and other periods is fundamental. I realized that it would be necessary to transform the profile of the teacher by inverting his role, in order to place students as promoters of the search for knowledge. Professor 5 speech brings the need to “[...] break dogmas, paradigms, concepts and prejudices of a generation of teachers ”. It is natural that medical professionals trained in the traditional method and with a successful career show a certain lack of confidence, to come across the PBL in the first moment.

The perception of the need for teacher qualification was clear in six of the seven teachers, almost unanimously. With the change in the medical curriculum, an adaptation of the integration of practice and social integration was required, perhaps that is why so many teachers were mentioning that the most demanding PBL is not just because of the demand for greater creativity, but because of the proactivity to adapt the teaching strategies.

Understanding that the teaching model is

migrating from disciplinarity to interdisciplinarity involves the need for permanent training for teachers.

Curricular changes presuppose the transition from disciplinarity to interdisciplinarity, in addition to presenting new teaching-learning strategies, such as active methodologies, considered a new challenge for the training of teachers of the future (ARAÚJO; SASTRE, 2009, p. 6).

I considered a quote from Professor 5 to be important, in which he reports: “[...] I still lack concrete and well-grounded pillars to underpin and consolidate the method”. I noticed, in the teacher's speech, the insecurity to use strategies in the classroom. In my view, they complement each other, since the path to success after the adoption by the institution of an innovative method is the investment in training and continuous training.

In this axis 5, I was able to make a perspective of the future of the interviewees, measuring how their students would be in the job market after six years of graduation and how the innovative methodology would contribute to this egress in the market.

With the exception of Professor 5, all reports showed optimism and envisioned a professional adapted to technological changes, able to learn to learn with greater speed and with resolving characteristics for coping with everyday problems. PROFESSOR 5). This revelation is linked to the sudden break from the traditional to the PBL and society may not have time to welcome these changes, especially students.

Most educators, Teachers (1,2,3,4,6, and 7) complemented that “[...] the active formation for the transformation of the individual for being in daily contact with the problem situations”. Professor 3's testimony brings a vision of the future based on “[...] graduates who acquire greater capacity to learn to learn throughout their professional life will be better prepared for changes in the market”.

All teachers mentioned the cycle of demands and needs of the population in relation to health, which has been changing more and more rapidly, both in the public and private systems. According to Professor 7, this training model will provide students with the opportunity to “[...] learn from the changing needs of the population since the beginning of graduation, forming an individual with the ability to relate to political, socioeconomic and cultural dimensions [...] ”And prepare for the constant social changes.

Learning how to manage classes correlating these biological, psychological and social domains is an advance for a continental country that has great demographic variation.

[...] health needs, in a more comprehensive way, are originated by the way human societies live life, which implies interfaces between the demographic characteristics of populations, their culture and socioeconomic organization, in a given territory and ecosystem. The combination of biological, cultural, subjective, social, political and economic nature elements produces the set of health needs of a given society (STOTZ, 1991).

I realized, in the words of all Teachers 1, 2, 3, 4, 5, 6 and 7, that “[...] the method is capable of transforming attitudes and behavior in the face of the situations that the work environment imposes on the day to day [...]” health professionals. This ability has been noticed since the first graduation period by teachers.

In relation to this perspective, I analyzed in the speeches that teachers, even at the beginning of the course, recognize that the courses will form a general clinical profile, which, because they are part of the first day of school, in the context of learning, there will be no further business in order to continue their journey in order to continue their journey.

I was also able to verify, based on the statements of Professors 2, 3, 4, 6 and 7, that “[...] the conduct of the active method will enhance a more humanist professional prepared to meet the needs of the market and the health of the population”. I noticed also the relativization between traditional education and PBL on the safety of the professional who, since the beginning of his graduation, maintains direct contact with society.

The protected environment is used by laboratories and classrooms to contribute to the student's cognitive domain over six years, but this learning environment alone is not able to stimulate the student in the biopsychosocial domains, as it reduces opportunities for living with the health network.

According to the report of Professor 7, “[...] the apprentice who goes through graduation in conjunction with the field training starts to live and relate to the real social optics, realizing the health management problems, the sociopolitical coexistence, closely watches the patient's pain and live with illness”.

I realized, in the words of Professors 3, 5 and 7, that “[...] the student, living and going through the six years of graduation in an environment protected by teaching, but contemplated by the association of the theory to the practice of a real world, will be an individual more prepared for the market”.

“The connivance with poverty, with the therapeutic cultural difficulties, with the communities weakened by the trafficking traffic, through the habit, will

be a professional more adapted to the conditions of the current market (PROFESSOR 7). The MEC, SUS and the DCNs promote a changed medical education with validation of the model with a focus on an emancipator, in which the student comes into contact with social transformations, a question that was previously shielded in the protected environment of the classrooms.

In the perspective of permanent education for workers in the Unified Health System - SUS, the expansion of critical capacity, aiming at the transformation of their own practices, has been the axis in the construction of educational proposals with an emancipatory approach, with the use of active teaching-learning methodologies (CADERNO DE COSO, HOSPITAL SÍRIO LIBANÊS, 2014, p.6).

Only one professor made an inference showing that he was concerned with the insertion of the graduate in the market. The transition from the ways of teaching is being implemented in the faculties that have recently emerged without the adhesion of all existing faculties. In 2014, the National Curriculum Guidelines pointed the way for methodological change, but they did not impose a schedule for all institutions to adopt or structure themselves in the active method. Large and renowned country faculties, mainly in the public, continue to traditional methodology, as well as the selective tests of medical residency and the selective notices of public tenders. “This may cause difficulties for the student who is in transition” (TEACHER 5).

Based on the research carried out, I considered the contributions of teachers to be potent in the face of the short time of experience in the methodology. The reported approaches were useful for the application in the exhibition of partial results acquired so far as a reflective strategy in the pedagogical week of 2020. Analysis of the data makes interfaces with the difficulties studied in articles and brings innovative results that will be dealt with in the next chapter.

IV. FINAL CONSIDERATIONS

When starting this research, I had no perception of how the historical evolution of medical education was accompanied by so many paradigm breaks. The fact is that, when comparing with the implantations or innovations, either of medical schools, or of new methods, one thing is common: the participation of the government and the disruption of society with the theme.

The medical training of the hygienist era struggled to be recognized in society. Scientific constructions were a target to be reached for professional

recognition, in an attempt to overlap with the practices of traditional healers. Today, in keeping with the 19th century period, it has not been easy to change the medical teaching methodology and evolve into a new curriculum matrix.

At that time, there was an effort to differentiate the medical professional from society. Today there is a need to reposition the medical profession for a more generalist environment. This effort to train professionals has had the same authorship throughout history and came from government power to meet the demands of the health needs of the population in the respective times.

I perceive significant changes, but, to be welcomed by the scientific society and recognized by the civil society, it will take years if we observe the circadian cycle of changes in medical education. We already have decades of innovative pedagogy in the world and, even knowing the existence of proven successful curriculum models, such as the Canadian and the Dutch, with regard to medical training, we are participating in this transformation in the same State in which the first school of surgery in Brazil was founded.

Historically, it seems that we are pursuing a model that, although we call it the new, was applied as a necessity to treat diseases, pests and epidemics in the imperial era. The monarchy's proactivity supported the search for a cure and encouraged scientists to actively search for remedies to remedy the ills of the time. The proposal for an education that we call innovative and active in current medical education seems to seek this same role for the student as a center for the construction of knowledge, aiming to form an individual capable of learning to always learn as scientists of the 19th century did in the discoveries of tropical diseases.

Changing is a challenge. The question regarding this change still persists, which is why many professionals question this new format. Are we modifying the teaching model to meet the market, or has society changed and that is why we are changing the way of learning and teaching?

The fact that I was able to learn from this research is that the health needs of the population changed a lot after the implantation of SUS in 1988, which brought the right to health of the population as a duty of the State. With the political and social maturity of Brazilians, the country opened many strategies for dealing with various health system problems, but the training of human resources was out of line with the growth rate of the public health network.

In the last two decades (2000-2020), the public power has promoted promoting and encouraging governance and governmentality around the training of health professionals, in order to meet the network's singularities

in their different cultures in our continental country.

Nowadays, it has become increasingly clear that only the student's cognitive domain, although fundamental in the teaching-learning process, is not enough to accommodate cultural diversity, the effects of globalization and the coexistence with new technologies has made it expand the frontiers of knowledge.

Changes on their own bring resistance and the change in the format of teaching would be no different. But did the PBL demand changes in the education of formacausal or did it emerge as a consequence? It is perceived that society has changed and the active method has only been adequate to accommodate these social changes. Another point was the advancement of technology, which changed a generation and increased several sources of research with the Internet.

For several moments, I came across testimonies that portrayed the teacher's resistance and mistrust towards the PBL, when argued in the interviews. Challenges such as planning, managing classes and using tools appropriate to the method raise doubts. Do these phenomena reported by teachers occur due to the new methodological paradigm or the innovation of the required teacher's posture? This natural discomfort may be related to the way we were educated in the traditional method in which we received as good listeners the transfer of the teacher and today, as teachers, we participate in the displacement of power by changing the logic of the transmission of classes. Ceasing to be the main actor in the room is what the method suggests, so that the student assumes that place. And leaving the place of power is neither easy nor comfortable for those who are unaware of the practice proposed by the PBL.

Other conclusions could be perceived, when analyzing the resistance and demand to plan, manage and apply the PBL: the co-responsibility of the teacher in these questions. In this first consideration, teachers, when getting involved in the new methodology, feel more co-responsible for teaching, as they are part of the construction of knowledge.

From another point of view, the teacher feels more committed to the more integrated and synchronous format of the provision of the weekly pedagogical modules, which point out the trajectory of the content to be worked on by the teaching group in relation to the same theme. Thus, theoretical classes are often complemented with the synergy of approaching the same subjects concomitantly with other classes, such as microscopy, general skills, medical and morphofunctional skills, in addition to field practice at SUS. Teachers know and know that their part must be done on time and with satisfaction,

so as not to compromise the construction of subsequent classes.

The syllabus of learning is arranged by the coordinates of the modules with the general objective and the specifics to be worked on during the week. With this, each teacher knows the parallelism in which their colleagues are dynamizing with their students, either in the tutorials (classrooms), in the technical and skills laboratories, or in the field of depression.

This set of theory and praxis in PBL is not just an addition of knowledge, but an intersection of knowledge domains in which content is worked in the real field of work with all the singularities and deficiencies that the reality of the health system has in its gradual evolution. The teaching-community requires more teachers and is a point for them to be attentive to the fulfillment of their own objectives and their syllabus. As for the problems faced, these are problematized providing opportunities for learning in ethics, management, communication and other areas that the traditional curriculum did not offer.

According to the comparative study, two more critical phenomena are perceived: applying tools and handling the method. From these two inferences appears a peaceful point: to improve these competencies, one must work with the constant training of the teacher.

Another interesting fact is the perceptions of the medical market with the new paradigms of the teaching model different from the one in which the teachers themselves were educated. Unaccustomed to the term, while distant from education, they compared educational models without knowing the origin or motives that led to this change. The term used, biopsychosocial, is a term that seems to conflict with traditional training. Some claim to be a term that softens the doctor's hard training, smoothing and even damaging the knowledge base necessary for good training. Studies have already shown that the point of arrival at the level of cognition does not vary from one methodology to another. Both are effective. What can be noticed from the beginning is the critical reflective performance of the student and his progress in communicability,

Still on the teacher's resistance to the method, one can infer the paradigmatic change. Changing the logic of the teacher's transmission as a center of knowledge for the student and building his own knowledge is a displacement of power. The generation that is in the current market, as well as that of their parents and grandparents, came from an educated education through the active role of the teacher and the student's passive. This role was indisputable until a few decades ago. So the doubt remains: Why change the way of teaching?

Most people who are in contact with the active subject already understand, accept and promote the method after getting to know it better. According to teachers' reports after the first year of experience in innovative pedagogy, both students and teachers who were able to compare between traditional and PBL methods preferred the liberating education of self-construction.

Another main point is how to use the method. There is still a doubt: the challenge generated by teaching classes is due to the lack of adaptation to the new tools due to the lack of training to use them.

Another perceived point was the concern to use tools to standardize and resignify learning in PBL, through which the management proposes to initiate the awakening of knowledge through the student's prior knowledge, mobilizing his previous experience to motivate new discoveries. Learn by doing, applying, studying and adapting teaching strategies at all times. As, at the end of each class, a quick assessment of activity is proposed, the teacher approaches the opportunity of improvement almost instantaneously based on the reports of his dynamic overtones. A quiet point is that, in the same way that teachers become more profitable with each period, the pupil is approved for subsequent periods and becomes more critical and reflective, in addition to a known method. Since, in each period, there is a need for new teachers, these will come up with classes already used with the method, masoprofessors will confront, for the first time, with the PBL. This fact is due to the insufficiency of teachers trained and prepared for the challenges of methodological change.

At this point, several frontiers of study open up. In relation to the student progress line and the new teachers, he realized the need for continued education or a permanent teacher and teacher. Sorting and schedule these three dimensions to garantir educação resistência e as dificuldades dos novos professores dosperíodo os subsequentes? The traditional suppression of this training by the Date, much used in the last years by the institutions of higher education served as an organization instrument and planning the content to be passed on by the teacher in the classroom. Here is the restlessness of teaching, training and changing the posture, how to identify the needs of teachers?

The change in teaching methodology, even more than a training as valued as medical, could not go unnoticed or without controversy in the eyes of its representatives. However, it is worth remembering, as mentioned in the story, that the implantation of the scientific medicine in Brazil after the implementation of the first medical faculties had great opposition to the

doctors, healers and midwives, who performed, since the discovery of the country, their way to heal.

We can conjecture that the term biopsychosocial, widely used both in the citations of the referenced authors and in the interviews, seems to conflict with traditional training due to the expansion of domains that are not dealt with throughout the curriculum of traditional training. The government plan, when proposing new guidelines, saw the perception of social interests and change in the need for users' health, reaching the conclusion of what points to the formation of a generalist profile, in order to ensure the greater number of places in the workforce of the countries.

As for the future doctor, it seems, we have to leave some gaps in the field of doubt still open. In the same way that we treat PBL as an innovative pedagogy, it does not have a contingent of trained teachers and graduates, sufficient for a comparative sampling, to arbitrate that the traditional method has no success or effectiveness in the PBL.

Is teaching that we are promoting enough to meet the population's health needs?

Will this biopsychosocial training serve the market, the future doctor and the medical market?

It can be seen, at the conclusion of the work, that the professors of the Faculty of Medicine of Eunápolis are adapting to the method throughout the course, as proposed by innovative methodologies: a learning cycle similar to a constructivist spiral.

Based on the perceptions of the research work, I realized the need to separate the triad that makes up the education of the new teacher. A product of this work that I named "Sparks of the tutor" (Appendix B), in which is the compendium that guides the step by step of tutoring by the active method with the posture that the facilitator must maintain in class. The instrument will serve to guide and reduce challenges, as well as the resistance of teachers to PBL: those who have experience in traditional teaching or those who have not yet managed tutoring.

I affirm that this instrument does not have the proposal of plastering the facilitator, who must lead the moment of learning with the unusual situations that may appear in its unfolding. However, it is the product of this research reflective and pedagogical advisor to support the development from the beginning to the moment of tutoring assessment.

Finally, if the method is based on problem situations or on problematizing real situations to achieve its goal of teaching and learning, then many current questions are capable of stimulating everyone to anxiety. I realize that these controversies in relation to the teaching

method may be a sign that we are on the right path, looking for answers in future research.

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